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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,143	04/12/2004	Dae-woo Cho	Q79943	1162
23373 7590 12/27/2006 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER MYERS, PAUL R	
			ART UNIT	PAPER NUMBER
			2111	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/27/2006	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/822,143	Applicant(s) CHO, DAE-WOO	
	Examiner Paul R. Myers	Art Unit 2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/3/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 11/2/06 have been fully considered but they are not persuasive.

In regards to applicants argument that “as illustrated in Lien Fig. 5, the device driver 17 is external to the adapter 2”: Figure 5 illustrates system software associated with the automatic system configuring operation of the invention. Figure 5 is NOT the physical location of the stored driver it is instead the **association** of the software. Figure 5 is a well known standard way (Often called software or protocol layers) of showing how the software and hardware interrelate NOT the storage locations of the software. Lien expressly states that “the device driver (or drivers) is read **from** the adapter , that is/are needed for operating the respective adapter” (Column 5 lines 25-41).

In regards to applicants argument that “Lien discloses that a resource manager uses the attribute information to set up configuration information in order to read a device driver 17 **for** the adapter”: The correct quote is: “This attribute information in used by the resource manager to set up configuration elements” ... “, to read a device driver (or drivers) 17 **from** the adapter” (Emphasis added).

In regards to applicants argument that there is no teaching or suggestion in Clark that built-in driver programs are loaded to the operating system, “Merely because BIOS functions are loaded does not teach or suggest the loading of built-in driver programs”: Clark teaches loading at least one piece of software needed for the operation of the extension card from the extension card at bootup. This would make obvious to a person of ordinary skill in the art at the time of the

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invention to load all software needed for proper operation of the extension card which would include driver programs and settings. However Lien expressly teaches loading Device Driver(s) from the expansion card which is needed for the proper operation of the expansion card. Lien however only teaches Hot/Live/Powered insertion and is silent upon Cold/depowered insertion (The normal mode of insertion). While it would be stupid for Lien to only support Hot insertion and not Cold insertion, it is theoretically possible to only support Hot insertion thus requiring removing an adapter if it is cold inserted then reinserting it when hot. Since this is a theoretical possibility, instead of stating loading when the system is booted is inherent the examiner decided to cite Clark that expressly teaches loading software when the system is booted, thus supporting both Hot and Cold insertion which is how all known Hot insertion systems work.

In regards to applicants argument that “The computer system of Lien is not in a booted state”: This is clearly incorrect. Lien only teaches in a booted state and is silent about the transition between a non-booted (Cold) and booted (Hot) state. The claim language states the program is loaded “when the computer system is booted in a state that the interface card connects with the extension card”. To a person of ordinary skill in the art, this means the system transitions from a non-booted state to a booted state and that the card is inserted in the expansion slot. Had the claim language stated “when the computer system is in a booted state” the examiner would have applied Lien as a 102 rejection. Unfortunately Lien does not state that the driver is loaded in the normal manner when the system is booted.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so

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long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 10-13, 17-18, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lien et al PN 5,386,567 in view of Clark PN 5,448,045.

In regards to claims 1, 10, 17-18, 21: Lien et al teaches a computer system (1 and 2) having a display device (Screen on figure 1), an input device (Keyboard or camera), a storage medium (5), a processor (4), an operating system (OS), and a local bus (7 and 8) capable of performing data transmission with the processor for a predetermined timing, the computer system comprising: at least one extension slot (9 and 10), provided in the computer system, operable to connect with the local bus (7,8); and at least one interface card (2), detachably mounted in the extension slot, operable to load built-in driver programs (S8) and environmental setting values (S7) to the operating system (OS). Lien et al teaches the programs are loaded when the adapter card is inserted as opposed to when the computer system is booted. Clark

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teaches (Column 9 lines 26-36 and Figure 8) when a system is booted in a state that an expansion card connects to an expansion slot the expansion BIOS is loaded from the expansion card. It would have been obvious to a person of ordinary skill in the art at the time of the invention to also load the adapter control software from the adapter when the system is booted as well as when the card is inserted because this would have prevented a need to remove the adapted and reinsert it each time the system is rebooted.

In regards to claim 2: Lien et al teaches the interface card including an interface module (the pins 14-16) connectable with the local bus (via electrical connector 9); and a memory device (13) operable to store the driver programs when said driver programs make the interface module recognized to the operating system and the environmental setting values.

In regards to claims 3, 11-13 and 22: Lien teaches the driver programs and environmental settings being stored in the memory on the adapter. Lien does not expressly teach the memory being partitioned. Official notice is taken that memory partitions are common. It would have been obvious to partition the memory because this would have allowed for an organized memory management.

4. Claims 4-6, 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lien et al PN 5,386,567 in view of Clark PN 5,448,045 as applied to claim 3 above, and further in view of Sherer et al PN 5,459,854.

In regards to claims 4-6, 14-16: Lien et al teaches loading the device driver to the operating system as described above. Lien et al is silent upon the device driver being the correct device driver for the operating system. Sherer teaches loading software based upon the

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architecture of the system including operating system. Script files such as Autoexec.bat and Config.sys or and of the multiple .ini files are notoriously well known. It would have been obvious to load the correct device driver for the operating system because this would have allowed Lien's system to function properly.

In regards to claim 23: Lien teaches the driver being stored in an accessible memory in the adapter. Script files are notoriously well known with their only requirement being that they are stored in an accessible memory when needed. It would have been obvious to store the scripter file in the memory with the Driver because this would have kept the data together and would have allowed for an organized memory management. See also MPEP 2144.04 V B.

In regards to claim 24: Sherer teaches loading software based upon the architecture of the system including operating system.

5. Claims 8-9, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lien et al PN 5,386,567 in view of Clark PN 5,448,045 and Sherer et al PN 5,459,854 as applied to claim 1 above, and further in view of Hitz et al PN 5,485,579.

In regards to claim 7: Lien et al teaches loading the device driver to the operating system as described above. Lien et al is silent upon which operating system is used. Sherer teaches UNIX and DOS operating systems. Hitz et al teaches a with multiple operating systems in which a virtual file system is used to allow for different operating systems. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a virtual file system because this would have allowed for ease in dealing with multiple different operating systems.

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In regards to claims 8 and 19: Lien et al does not teach a virtual file system. Hitz et al teaches a with multiple operating systems in which a virtual file system is used to allow for different operating systems. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a virtual file system because this would have allowed for ease in dealing with multiple different operating systems.

In regards to claims 9 and 20: Hitz teaches a tree structure.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

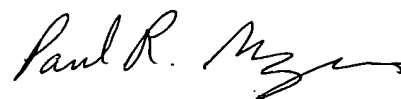
PN 6,704,824 to Goodman teaches installing the correct driver based upon the detected operating system (Column 5 lines 57-65).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul R. Myers whose telephone number is 571 272 3639. The examiner can normally be reached on Mon-Thur 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on 571-272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



PRM
December 20, 2006

PAUL R. MYERS
PRIMARY EXAMINER